

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**



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Order Instituting Rulemaking to Identify  
Disadvantaged Communities in the  
San Joaquin Valley and Analyze  
Economically Feasible Options to Increase  
Access to Affordable Energy in those  
Disadvantaged Communities.

R.15-03-010  
(Filed March 26, 2015)

**SOUTHERN CALIFORNIA GAS COMPANY'S (U 904 G)  
NATURAL GAS SERVICE EXTENSION COST ESTIMATES FOR REPRESENTATIVE  
COMMUNITIES PURSUANT TO EMAIL RULING**

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October 12, 2016

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**I. INTRODUCTION**

Pursuant to the September 8, 2016 Email Ruling of Administrative Law Judge (“ALJ”) M. McKinney in the above captioned proceeding, Southern California Gas Company (“SoCalGas”) hereby submits its cost estimates for natural gas service extensions for the communities of Selma City, Porterville City, Rosamond Census Designated Place (“CDP”), Buttonwillow CDP, California City, and Allensworth CDP.

At the August 31, 2016 workshop, ALJ McKinney directed SoCalGas and Pacific Gas and Electric Company (“PG&E”) to provide costs estimates for natural gas service extension for three to five communities in each service territory by October 12, 2016. The ALJ also directed that the proposed list of representative communities for cost estimates be served and filed on September 12, 2016. On September 12, 2016, the Office of Ratepayer Advocates (“ORA”) served and filed a list of five representative communities for cost-estimates for each utility. SoCalGas list contained the five communities mentioned above. On October 5, 2016, Energy

Division contacted SoCalGas to address the feasibility of adding the community of Allensworth CDP to the list.

## **II. FACTORS INCLUDED IN DEVELOPMENT OF COST ESTIMATES**

### **A. Assumptions Made in Developing Cost Estimates**

In the development of the cost estimates, SoCalGas made the following assumptions for each community.

- SoCalGas provided a total estimated household by subtracting the total household count from the aggregated gas household count found in the public list of communities, as shown in Table 1 below.
- SoCalGas did not locate exact customer locations; some unserved households will be close to an existing main with no main extensions needed and costing just the Single Service/Meter Set Assembly (“MSA”) at \$1,277 per household (assuming \$1,398 estimated residential end use allowance). While some will be farther away from the main and require a main extension and pressure betterment, plus the Single Service/MSA at \$1,277 per household (assuming \$1,398 estimated residential end use allowance).
- Based on current cost experiences for new construction, SoCalGas used an estimate of \$2,675 (without allowances) as an average cost for single service/MSA per household regardless of differences in service line lengths from house to house or location of main in the street, permitting or right of way.
- SoCalGas grouped household counts for those instances where households were farther away from an existing main.

- SoCalGas also assumed usage of 100 cubic feet per hour per household in each community for the purpose of determining pipe diameter, accurate sourcing feeds, and potential betterments.
- SoCalGas assumed this load amount provided for some future growth in the communities.
- SoCalGas added environmental cost estimates for some communities based on SoCalGas' knowledge of such areas and communities.
- Cost estimates for households include the potential allowance of \$1398 that each household may qualify for depending on end use (appliance equipment).

Water Heating	\$546
Space Heating	\$623
Cooktop & Oven	\$96
Dryer Stub	\$133
Total Allowances	\$1,398

- Cost estimates provided do not assume Applicant Installation methods.
- Cost estimates do not include Income Tax Component of Contributions and Advances for Construction ("ITTCA") which depends on the final cost after allowances are applied. Currently the ITTCA is at 22%.
- Cost estimates do not include "houeline" costs or conversion of appliances to natural gas.
- The cost estimates are not reduced by the possible allowances paid to entities that fund the installation of a main for up to ten years based on future tie-ins to that main.
- Cost estimates are based on 2016 dollars and should be considered preliminary/conceptual estimates based on limited information provided and

would require detailed level investigation and planning to increase the level of accuracy.

**Table 1: Summary of Communities for SoCalGas' Cost Estimates**

#	Community Name	Total Household Estimate (AGS)	Total H/H - Aggregate Gas H/H	Min. Dist to gas pipeline	Aggregated Gas Household	Gas provider(s)	Electricity/ Households (AGS)	Gas/ Households (AGS)	Gas/ Electricity	Service level Category
127	SELMA CITY	6,752	44	0.00	6,708	PGE&SCG	100.9%	99.3%	98.4%	95%-100%
119	PORTERVILLE CITY	16,453	133	0.00	16,320	SCG	105.0%	99.2%	94.5%	90%-95%
123	ROSAMOND CDP	6,739	619	0.00	6,120	SCG	109.4%	90.8%	83.0%	80%-90%
15	BUTTONWILLOW CDP	393	23	0.00	370	SCG	127.7%	94.1%	73.7%	70%-80%
16	CALIFORNIA CITY	4,966	1,786	0.00	3,180	SCG	99.4%	64.0%	64.4%	50%-70%
2	ALLENSWORTH CDP	125	125	0.01	0	NONE	X	0%	0%	Zero%

### III. COST ESTIMATES FOR NATURAL GAS SERVICE EXTENSION

#### A. Selma City

SoCalGas estimated that 44 households in the City of Selma do not have natural gas service. In developing cost estimates for the City of Selma, SoCalGas adjusted the Distribution Extension (Medium Pressure Distribution Lines (“Med”)) estimate to reflect savings due to quantity installed. SoCalGas estimates the following cost estimates for the City of Selma:

- Single Service/Meter Set Assembly is \$1,277 per household (assuming \$1,398 estimated residential end use allowance).
- Two main extension laterals were modeled to the furthest extents of the community assuming each lateral served a grouping of 22 households each.
  - Total Distribution Extension (Med) is \$3,675,000.

Table 2 below provides a detailed breakdown of the Main Extension costs.

**Table 2: Detailed Breakdown of Main Extension Costs for the City of Selma**

Community of Selma City (~44 Households)					
Facilities	# of Households	Load	Quantity	\$/Unit	Cost (\$)
4" MP plastic main	22	2.2 MCFH	20,000 ft.	\$140.00	\$2,800,000.00
<b>2" MP plastic main</b>	<b>22</b>	<b>2.2 MCFH</b>	<b>7,000 ft.</b>	<b>\$125.00</b>	<b>\$ 875,000.00</b>
			Total		\$3,675,000.00

**B. City of Porterville**

SoCalGas estimated that 133 households in the City of Porterville do not have natural gas service. In developing cost estimates for the City of Porterville, SoCalGas adjusted the Distribution Extension (Med) estimate to reflect savings due to quantity installed. Additionally, SoCalGas added Distribution Pressure Betterment costs estimates which include higher costs due to work location, pipe abandonment, paving, and other factors required to provide gas service. SoCalGas estimates the following cost estimates for the City of Porterville:

- Single Service/Meter Set Assembly is \$1,277 per household (assuming \$1,398 estimated residential end use allowance).
- Main extension was modeled to the furthest extent of the community to serve a grouping of 133 households. In order to supply adequate pressure to these locations, pressure betterment was required to upsize the existing pipe diameter.
  - Total Distribution Pressure Betterment (Med) is \$495,000.
  - Total Distribution Extension (Med) is \$3,360,000.
  - Total Cost for gas service extension per household is not provided since exact location and distances of households are unknown.

Table 3 below provides a detailed breakdown of the Pressure Betterment Costs for the City of Porterville. Table 4 below provides a detailed breakdown of the Main Extension costs.

**Table 3: Detailed Breakdown of Pressure Betterment Costs for the City of Porterville**

Community of Porterville City (~133 Households)			
Facilities	Quantity	\$/Unit	Cost (\$)
4" MP plastic main	3,000 ft.	\$ 165.00	\$ 495,000.00
		Total	\$ 495,000.00

**Table 4: Detailed Breakdown of Main Extension Costs for the City of Porterville**

Community of Porterville City (~133 Households)					
Facilities	# of Households	Load	Quantity	\$/Unit	Cost (\$)
4" MP plastic main	133	13.3 MCFH	24,000 ft.	\$140.00	\$3,360,000.00
				Total	\$3,360,000.00

SoCalGas estimated that 619 households (groups of households served off two laterals) in the Rosamond CDP do not have natural gas service. In developing cost estimates for the Rosamond CDP, SoCalGas adjusted the Distribution Extension (Med) estimate to reflect savings due to quantity installed. SoCalGas estimates the following cost estimates for the Rosamond CDP:

- Single Service/Meter Set Assembly is \$1,277 per household (assuming \$1,398 estimated residential end use allowance).
- Two main extension laterals were modeled to the furthest extents of the community assuming one lateral served a grouping of 219 households while the other served a grouping of 400 households.
  - Total Distribution Extension (Med) is \$7,260,000.

Table 5 below provides a detailed breakdown of the Main Extension costs.

**Table 5: Detailed Breakdown of Main Extension Costs for the Rosamond CDP**

Community of Rosamond CDP (~619 Households)					
Facilities	# of Households	Load	Quantity	\$/Unit	Cost (\$)
4" MP plastic main	219	21.9 MCFH	13,000	\$140.00	\$1,820,000.00
6" MP plastic main	400	40 MCFH	32,000	\$170.00	\$5,440,000.00
				Total	\$7,260,000.00

#### **D. Buttonwillow CDP**

SoCalGas estimated that 23 households in Buttonwillow CDP do not have natural gas service. In developing cost estimates for the Buttonwillow CDP, SoCalGas adjusted the Distribution Extension (Med) estimate to reflect savings due to quantity installed. SoCalGas estimates the following cost estimates for the Buttonwillow CDP:

- Single Service/Meter Set Assembly is \$1,277 per household (assuming \$1,398 estimated residential end use allowance).
- A main extension was modeled to the furthest extents of the community to serve a grouping of 23 households.
  - Total Distribution Extension (Med) is \$1,920,000.

Table 6 below provides a detailed breakdown of the Main Extension costs.

**Table 6: Detailed Breakdown of Main Extension Costs for the Buttonwillow CDP**

Community of Buttonwillow CDP (~23 Households)					
Facilities	# of Households	Load	Quantity	\$/Unit	Cost (\$)
2" MP plastic main	23	2.3 MCFH	16,000 ft.	\$120.00	\$1,920,000.00
				<b>Total</b>	<b>\$1,920,000.00</b>

#### **E. City of California City**

SoCalGas estimated that 1,786 households (groups of households served off two laterals) in the City of California City do not have natural gas service. In developing cost estimates for California City, SoCalGas adjusted the Distribution Extension (Med) estimate to reflect savings due to quantity installed. Additionally, SoCalGas added Distribution Pressure Betterment costs estimates which include higher costs due to work location, pipe abandonment, paving, and other factors required to provide gas service. SoCalGas estimates the following cost estimates for the City of California City:



- Single Service/Meter Set Assembly is \$1,277 per household (assuming \$1,398 estimated residential end use allowance).
- Main extension and laterals were modeled to the furthest extents of the community to serve a grouping of 595 households and a grouping of 1,191 households. In order to supply adequate pressure to these locations, system pressure betterment was required to upsize the existing pipe diameter.
  - Total Distribution Pressure Betterment (Med) is \$1,050,000.
  - Total Distribution Extension (Med) is \$7,400,000.

Table 7 below provides a detailed breakdown of the Pressure Betterment Costs for California City. Table 8 below provides a detailed breakdown of the Main Extension costs.

**Table 7: Detailed Breakdown of Pressure Betterment Cost Estimates for California City**

Community of California City (~1,786 Households)			
Facilities	Quantity	\$/Unit	Cost (\$)
6" MP main betterment	5,000	210	\$1,050,000.00
		<b>Total</b>	<b>\$1,050,000.00</b>

**Table 8: Detailed Breakdown of Main Extension Cost Estimates for California City**

Community of California City (~1,786 Households)					
Facilities	# of Households	Load	Quantity	\$/Unit	Cost (\$)
3" MP plastic main	595	59.5 MCFH	10,000	\$ 135.00	\$1,350,000.00
6" MP plastic main	1191	119.1 MCFH	35,000	\$ 170.00	\$5,950,000.00
Environmental Services	Tortoises, Munitions from Air Force Base				\$100,000.00
				Total	\$7,400,000.00

## **F. Allensworth CDP**

SoCalGas estimated that 125 households in the Allensworth CDP do not have natural gas service. In developing cost estimates for the Allensworth CDP, SoCalGas took into consideration environmental services that may be required to extend service, and anticipated substructures from community wells (\$125/ft). Additionally, SoCalGas has included cost for distribution

regulatory station because the closest feed is off of a high pressure line.<sup>1</sup> Given the uncertainties in providing service to Allensworth, SoCalGas has provided a high and low estimate:

- Low Estimate: Installation of regulator station and 1,000' main extension needed to serve 125 households.
  - Total Distribution Regulator Station is \$400,000.
  - Total Distribution Extension (Med & High) is \$270,000.

Table 9 below provides a detailed breakdown of the low estimates for the Allensworth CDP.

**Table 9: Detailed Breakdown of High Estimate for Extension Costs for Allensworth**

Community of Allensworth (~125 Households)					
Facilities	# of Households	Load	Quantity	\$/Unit	Cost (\$)
2" HP steel main	-	-	100 ft.	\$ 450.00	\$ 45,000.00
District Regulator Station			1 unit	\$400,000.00	\$ 400,000.00
6" MP plastic main	125	30.6 MCFH	1,000	\$ 200.00	\$ 200,000.00
Environmental Services	Owls, Squirrel & Rodent				\$ 25,000.00
				Total	\$ 670,000.00

- High Estimate: Main extension and laterals were modeled to the furthest extents of the community to serve a grouping of 125 households.
  - Total Distribution Regulator Station is \$400,000.
  - Total Distribution Extension (Med & High) is \$4,096,500.

Table 10 below provides a detailed breakdown of the high estimates for the Allensworth CDP.

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<sup>1</sup> For purposes of providing natural gas to customers, SoCalGas taps off high pressure lines to service medium pressure lines, which ultimately will provide service to customers.

**Table 10: Detailed Breakdown of Low Estimate for Extension Costs for Allensworth**

Community of Allensworth (~125 Households)					
Facilities	# of Households	Load	Quantity	\$/Unit	Cost (\$)
2" HP steel main	-	-	100 ft.	\$ 450.00	\$ 45,000.00
District Regulator Station			1 unit	\$400,000.00	\$ 400,000.00
6" MP plastic main	-	-	9,800 ft.	\$ 180.00	\$ 1,764,000.00
2" MP plastic main	125	30.6 MCFH	17,500 ft.	\$ 125.00	\$ 2,187,500.00
Environmental Services	Owls, Squirrel & Rodent				\$ 100,000.00
				Total	\$ 4,496,500.00

Respectfully Submitted,

By: /s/ Kim F. Hassan  
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